Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Stephen A. Owens
Director

HAZARDOUS AIR POLLUTANTS RULE STAKEHOLDER MEETING SUMMARY

DATE: **August 10, 2005**
TIME: **9:30 a.m.**
LOCATION: **ASU Downtown Center, C368-370**
502 E. Monroe Street, Phoenix, Arizona

PUBLIC ATTENDEES
(See attached)

ADEQ STAFF
Nancy Wrona
Diane Arnst
Steve Burr
Ira Domsky
Kevin Force
Peter Hyde
Corky Martinkovic
Eric Massey

ADDITIONAL ATTENDEES
Kelly Cairo, Gunn Communications
Pat Clymer, Weston Solutions
Kevin Eldridge, Weston Solutions
Theresa Gunn, Gunn Communications
Gary Lage, Weston Solutions
Steve Mauch, Weston Solutions
Teresa Verstraet, Weston Solutions

AGENDA
- Opening Remarks
- Introductions and Meeting Overview
- Presentation of Procedure for Air Quality Dispersion Modeling
- Stakeholder Discussion
- Additional Stakeholder Comments on Acute and Chronic Concentration Levels
- Next Steps
- Adjourn

OPENING REMARKS
Nancy Wrona thanked attendees for their participation in the Hazardous Air Pollutants (HAPs) rulemaking process. She noted that based on stakeholder input, changes to the phone-in process have been made such as providing microphones and a toll-free number. She said that a meeting was held in Tucson on July 26 and was well attended.

INTRODUCTIONS AND MEETING OVERVIEW
Meeting facilitator Theresa Gunn called for introductions and reviewed guidelines for holding a good meeting.

PRESENTATION OF PROCEDURE FOR AIR QUALITY DISPERSION MODELING

Steve Burr explained that the modeling outcomes will be used to assist the agency in determining if a source categories should be listed in the rule because their potential HAP emissions may be harmful to the environment or human health.

Steve Mauch, Weston Solutions, provided the presentation, "Air Quality Dispersion Modeling Methodology for the Arizona HAPRACT Rule," which is available on the ADEQ website at www.azdeq.gov/function/laws/draft.html#haps. Highlights of the presentation included:

- Hazardous Air Pollutant Reasonably Available Control Technology (HAPRACT) is the applicable level of emissions control.
- HAPRACT is determined on a case-by-case basis, dependent on the quantity of HAP emissions and type of industry.
- Facilities emitting 1-10 tons per year (tpy) of one HAP, or 2.5-25 tpy of all HAPs are potentially subject to HAPRACT if the source category is listed in the rule. However, facilities have the option to complete a risk management analysis to document that their emissions are not harmful.
- In modeling source categories by Standard Industrial Code (SIC), emissions of specific HAP compounds are matched to specific emission points at each facility.
- Using estimates from the 1-hour and annual potential maximum concentrations (MCs) for each HAP from a facility the following methods are proposed:
    - If all MCs are less than 80% of the ambient air concentrations, then the SIC code is not added to the list.
    - If any MC is greater than 120% of the ACCs, then the SIC code is added to the list.
    - If MCs are 80-120%, then case-by-case analysis will be conducted to determine whether or not the source category should be listed.
- SCREEN3 is routinely used in regulatory screening modeling applications.
- Model inputs for HAP emission rates use potential, rather than actual emissions, because potential determines maximum output in a worst-case scenario.
- "Source" is used here generically to include stacks, area sources, etc.
- When actual building dimensions are available, they are used as model inputs.
- Model inputs consider receptor distances starting at the process area boundary, not at the "fence line."
- The maximum 1-hour average is scaled to an annual average using a factor of 0.08. This is the EPA recommended factor and is typically used in the regulatory arena.

Gunn asked the stakeholders to identify their issues and concerns. (The issues listed below in italics are verbatim from cards submitted by the stakeholders.) Stakeholder questions and comments included:

- How would health-based concentrations apply to the list? How do you address areas with multiple facilities? **Response**: We are not able to account for this issue because input is source-based.
- Why is this so, when the statute refers to bioaccumulation? **Response**: This is a matter of available data, not a matter of statute.
- We should collect this data. **Response**: If categories are not included and stakeholders feel they should be considered due to background concentrations, additional categories can be considered.

- *The SCREEN model is overly conservative. New 2003-2005 EPA modeling guidelines imply should not use SCREEN for this use (i.e. HAPs).* **Response**: SCREEN3 is conservative and is designed to be so for regulatory processes. If SCREEN3 was not used, some other type of screening procedure would have to be used. It is generally desirable to use an established screen. Once a facility is in the program, a risk management assessment can be completed. The conservatism of SCREEN3 is recognized and used as a tool to build this list.
- Is this list of inventories available? **Response**: We will report the list of sources that will be considered.
- Do you have a sense of how many sources will be listed per source category? **Response**: We are dealing with existing lists of sources and are modeling every facility.
- The statute says a source category must find emissions that result in adverse affects to human health, not "potential." Therefore, targeting potential emissions may not be the correct approach.
- Will you model every source in Arizona? **Response**: We have a pool of information and model each source at 1 gram per second for all facilities for which we have data.
- Was the list of sources actual or potential emissions? **Response**: The initial list provided to Weston showed actual emissions.
- By using potential to emit, you should consider that a source may never reach this potential. **Response**: The best available data is used, then we take into account facility restraints. The potential levels provided to counties are also used.
- *Look at existing emissions relative to sources that do not end up on the list.* The potentials may not be a facility's actual level of emissions. **Response**: The Legislature authorizes the agency to regulate on potential to emit.
- Please elaborate on rural dispersion, this seems counter-intuitive. **Response**: From a modeling perspective, EPA relies on land-use classifications of the land around the source. As defined by the EPA, the urban classification is based on very high density land use surrounding the facility. Areas rarely meet the EPA's definition of urban.
- *If the MC doesn't meet the criteria, shouldn't the answer be NO (regarding slide eight of the presentation). Why are you re-evaluating and manually classifying. If no is no, why do a third process?* It looks like certain SIC codes are evaluated multiple times. **Response**: We don't have a standardized process yet and are still addressing the initial MCs over 120%. Also, we did not pick every conservative option available. We tried to balance a conservative approach to protect human health, yet balance assumptions with available data. Real data were used as much as possible.
- On the procedures document, explain the criteria used for picking an individual source. **Response**: Page five of the document shows the criteria.
- What happens once an individual source is chosen? Is the owner of the source notified and given the chance to verify the data? **Response**: No, that would not occur other than through this stakeholder process. However, the report will include the source/s modeled and assumptions used.
- On slide four of the presentation, the matrix shows HAPRACT applicability. Are MACT sources also subject to HAPRACT? **Response**: Facilities covered by MACT are not subject to HAPRACT. However, those with emissions above 10 tpy for a single HAP and 25 tpy for all HAPs could be affected in the future if a HAP is added to the state list that is not on the federal list.

- *How conservative is the conversion formula for converting 1-hour to annual predicted concentrations?* **Response**: EPA developed the factor. We will check into this. (*Note*: EPA454/R92019, Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, references this factor and is available on the EPA TTN website under the SCRAM link.)
- *Will the modeling approach be used for any other HAPs rule purposes?* **Response**: No. Facilities also have the option of running an RMA.
- *Is the rural dispersion model assumption more or less conservative than the urban assumption? Why is the rural coefficient used for all modeling? What difference does it make?* **Response**: This depends on the source configuration.
- *To determine human exposure, why is the "process area" an appropriate exposure location?* **Response**: This is used consistently as described in the Department's guidelines for determining what constitutes ambient air.
- *The process area boundary policy should be revisited to ensure consistency with ADEQ's regulations (particularly the definition of "ambient air").* **Response**: (This question was previously addressed.)
- *Is the SCREEN3 model appropriate for reactive HAPs (like formaldehyde) or particle-bound HAPs that dry deposit from the atmosphere?* **Response**: We are not using SCREEN3 to model reactions, just concentrations.
- *Does the conservatism in the SCREEN3 model tend to overpredict actual ambient impacts by more than 120%?* **Response**: This is unknown. However, a cutoff point had to be selected and 120% seemed appropriate.
- *Did you consider using EPA models designed to model actual human exposure, rather than SCREEN3?* EPA 2005(b) identifies seven models. (*Note*: This reference may be found at www.epa.gov/osp/presentations/airtox/ozkaynak.pdf.) **Response**: The process is designed to use ambient air concentrations. CMAQ is the only model that is more sophisticated regarding deposition. However, we are focusing on concentrations, which is suited to the use of SCREEN3.
- *How can you have a 25m receptor with a 40m building if you use the center of the building as a reference starting point? The cavity zone will always be outside of 25m if you don't have information.* **Response**: 25m might be inside the cavity, but this distance also includes height, which is a principle factor. The cavity zone won't always be outside the 25 meters.
- *How does the assumption of rural dispersion affect the modeling? What are other options? Many facilities are in urban areas.* **Response**: (This question was previously addressed.)
- *Process boundary use in the model is especially difficult results in concentrations greater than actually would exist where general public could be exposed – where ambient guidelines apply.* **Response**: We don't want to assume that a facility with certain boundaries will not affect the public. The department has a long-standing policy to use a strict definition of ambient air quality – air to which the public has access. This would include a parking lot, or customer area. It ensures that a facility with a large land area doesn't experience a change, such as through the sale of a portion of the land. Natural areas, such as a cliff facing, are taken into consideration.

- *How do health-based concentrations come into SIC list development? Factor in existing facilities in the AACs? What if ambient levels already exceed safe concentrations?* **Response**: (This question was previously addressed.)
- *What is the EPA reference for 0.08 factor?* **Response**: This is part of their EPA modeling guidance.
- *How do you handle plume rise due to non-ambient temperature emissions from volume sources? If emitting at ground/building height, overstate results.* **Response**: We are not considering plume rise for volume sources. Many sources were modeled as volume sources in cases where Weston was provided little or no data.
- *Will there be any attention paid to actual receptor distances?* **Response**: Because we are modeling for potential sources, including facilities that aren't in the state yet, we can't know where that will be for a specific facility.
- *What goes into the "manual, individual" determination of source categories in the between 80-120% range?* **Response**: We are getting results back now, and will bring the information back to this group.
- *What is the M parameter referred to on page five of the procedure?* **Response**: This is the "merge" parameter and part of EPA modeling guidance. We will check into this. (*Note*: EPA454/R92019, Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, references this factor and is available on the EPA TTN website under the SCRAM link.)
- *Modeling for potential vs. actual emissions. Does that consider other limitations, e.g. market, maintenance time, etc.?* **Response**: (This question was previously addressed.)
- *How will ADEQ determine the appropriate HAPRACT for a specific pollutant or SIC category? (Is this going to be addressed at a future meeting?)* **Response**: This will be determined case-by-case.
- The statute that governs the selection of source categories includes language regarding emissions resulting in adverse effects on human health, number of people exposed, excluding sources, limiting source area, and defining source. The methodology addresses the first area. In the future, will the methodology address the remaining issues? **Response**: Source categories will be considered on a case-by-case basis.

Gunn asked the group to address whether the modeling approach seems appropriate. Responses included:

- This is a good screen for throwing out sources; it is not necessarily adequate for listing them. We will need to see if the results are ridiculous.
- The process area boundary should be kept in mind.
- The screen model is conservative and for the most part ADEQ is conservative. I suggest considering results where an RMA is still an option.
- The model is too conservative for statutory purposes. The process area boundary deserves review and may be sufficient cause for departure from the long-standing policy. Violations of ambient air standards affect the entire air shed. Under this process, needs to show that there will be adverse effects to human health.
- *What is required for an RMA?*
- Considering the inadequacy of the statute, it is important to be as conservative as possible. There are serious effects on human health to consider, and it is ADEQ's responsibility to be conservative.

- What will be the yardstick to measure if the modeling approach is effective? **Response**: There is not a predetermined outcome.
- It seems it would be doing things backward to see the number of sources and decide if this is appropriate. Need to use the statute as a guide.

Gunn noted that the report on the outcome of the modeling will be available prior to the meeting held to discuss that topic.

ADDITIONAL STAKEHOLDER COMMENTS ON ACUTE AND CHRONIC CONCENTRATION LEVELS

Gunn requested any additional comments on concentration levels. Comments included:

- No additional comments, but this is pending review.
- We will complete our review and submit comments to ADEQ in September.

NEXT STEPS

Gunn provided information on the next meeting, which is scheduled for August 24, 9:30 a.m. at ASU Downtown Center, Phoenix. The purpose of the meeting will be to discuss the methodology used to determine de minimis levels, which will establish the level of facility change required to bring an existing facility into the program. Related materials will be available by August 16 at the ADEQ website: http://www.azdeq.gov/function/laws/draft.html#haps.

Stakeholder questions and comments included:

- Will there be more Tucson meetings? **Response**: We will continue to work to communicate with those in Tucson. We are committed to this stakeholder process.
- What is the process for getting questions answered between meetings? **Response**: Comments should be e-mailed to Steve Burr (sb5@azdeg.gov); however, we don't intend to provide a written response at this stage. All input received will be considered in drafting the strawman rule and there will be opportunity to comment.
- This process differs from other stakeholder processes, such as the 702 Rule. **Response**: Written response is not generally provided during the informal process. The 702 Rule was a very narrow process and unique situation compared to the typical stakeholder processes. In addition, questions and responses are captured at these meetings and are available in the meetings notes. All comment cards are recorded and will be responded to.

ACTION ITEMS

- Kevin Eldridge to provide EPA reference regarding converting 1-hour emissions to annual predicted concentrations and "m" parameter.
- Staff to provide stakeholders with information regarding the "manual, individual" determination of source categories in the range between 80-120%.

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PUBLIC ATTENDEES

Bert Acken, Lewis & Roca
Christopher Andrews, Andrews Environmental Mgmt.
Sandy Bahr, Sierra Club Grand Canyon Chapter
Chuck Bischoff, Jordan Bischoff McGuire & Hiser
Lisa Brautigam, Fennemore Craig PC
Al Brown, ASU Environmental Technical Management
Dan Casiraro, SRP
Susan Culp, Arizona League of Conservation Voters
Stan Curry, Gallagher & Kennedy
Cosimo DeMasi, Tucson Electric Power
John Dougherty, Tucson Chamber of Commerce
Kara Downey, Arizona Electric Power Cooperative
Joe Gibbs, City of Phoenix
Larry Hawke, Pima County DEQ
Joy Herr-Cardillo, Arizona Center for Law in the Public Interest
Jeff Homer, AAI
Cindy Ika, Mastercraft Cabinets, Inc.
Levi Jackson, Tucson Chamber of Commerce
Jay Kaprosy, Greater Phoenix Chamber of Commerce
Johanna M. Kuspert, Maricopa County Air Quality Dept.
Wayne Leipold, Phelps Dodge Miami
Brett Lindsay, Phoenix Cement Co.
Jeremy A. Lite, Quarles & Brady Streich Lang LLP
Eran Mahrer, APS/PNW
Jenn McCall, Freescale Semiconductor
Amanda McGennis, Arizona Chapter Associated General Contractors
Alison McGregor, Squire, Sanders
Frank Mendola, CEMEX
Joe Mikitish, Attorney General's Office
Sarah Pye, ENVIRON
Todd Rallison, Intel Corporation
Michelle Rill, Greater Phoenix Chamber of Commerce
Ed Springley, El Paso Natural Gas
Penny Allee Taylor, Southwest Gas
Scott Tobias, Pinal County
Steve Trussell, Arizona Rock Products Assoc.
Joyce Tsuji, Exponent
James Tunnell, AZ Assoc. of Industries
Bill Underwood, Gallagher & Kennedy
Kathleen Whalen, Arizona League of Conservation Voters
Anne Marie A. Wolfe, SERI
Linda Young, Intel